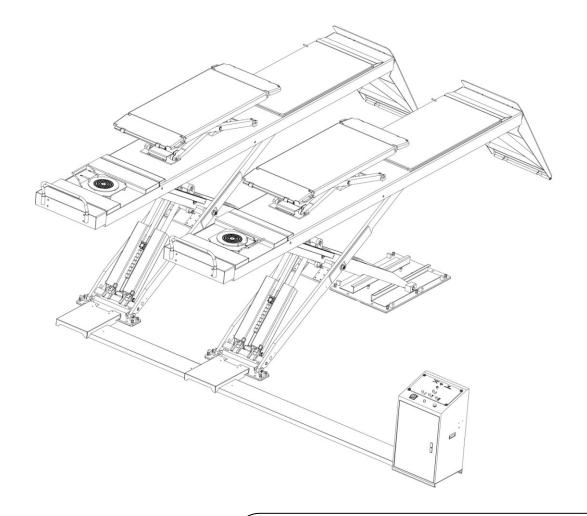
# Model No. EE-6604B/EE-6604S

Long platform scissor lift, Low Profile Electrical Leveling Lifting Capacity 4000KG Installation, Operation and Parts Manual





Distributed by



Please read this entire manual carefully and completely before installation or operation of the lift.



## **INDEX**



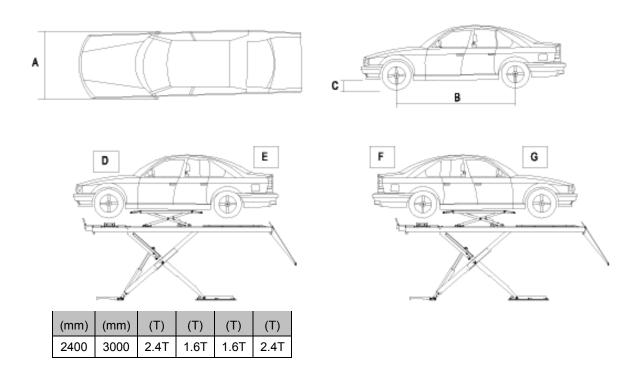
#### IMPORTANT SAFETY INSTRUCTIONS

#### 1.1 Important notices

We will offer one-year's quality warranty for the whole machine, during which any quality problem will be properly solved. However, we will not take any responsibility for whatever bad consequence resulted from improper installation and operation, overload running or unqualified ground condition.

This model is specially designed for lifting motor vehicles that weighs within its outmost lifting capacity. Users are not allowed to use it for any other purposes. Otherwise, we, as well as our sales agency, will not bear any responsibility for accidents or damages of the lift.

Make sure to pay careful attention to the label of the lifting capacity attached on the lift and never try to lift cars with its weight beyond.



Read this manual carefully before operating the machine so as to avoid economic loss or personnel casualty incurred by wrong operation.

Without our professional advice, users are not permitted to make any modification to the control unit or whatever mechanical unit.

3

#### 1.2 Qualified personnel

- 1.2.1 Only these qualified staff, who have been properly trained, can operate the lift.
- 1.2.2 Electrical connection must be done by a competent electrician.
- $1.2.3\ \mbox{People}$  who are not concerned are not allowed in the lifting area.

#### 1.3 Danger notices

- 1.3.1 Do not install the lift on any asphalt surface.
- 1.3.2 Read and understand all safety warnings before operating the lift.
- 1.3.3 Do not leave the controls while the lift is still in motion.
- 1.3.4 Keep hands and feet away from any moving parts. Keep feet clear of the lift when lowering.
- 1.3.5 Only these properly trained personnel can operate the lift.



- 1.3.6 Do not wear unfit clothes such as large clothes with flounces, tires, etc, which could be caught by moving parts of the lift.
- 1.3.7 To prevent evitable incidents, surrounding areas of the lift must be tidy and with nothing unconcerned.
- 1.3.8 The lift is simply designed to lift the entire body of vehicles, with its maximum weight within the lifting capacity.
- 1.3.9 Always insure the safety locks are engaged before any attempt to work near or under the vehicle. Never remove safety related components from the lift. Do not use if safety related components are damaged or missing.
- 1.3.10 Do not rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.
- 1.3.11 Check at any time the parts of the lift to ensure the agility of moving parts and the performance of synchronization. Ensure regular maintenance and if anything abnormal occurs, stop using the lift immediately and contact our dealers for help.
- 1.3.12 Lower the lift to its lowest position and do remember to cut off the power source when service finishes.
- 1.3.13 Do not modify any parts of the lift without manufacturer's advice.
- 1.3.14 If the lift is going to be left unused for a long time, users are required to:
- a. Disconnect the power;
- b. Empty the oil tank;
- c. Lubricate the moving parts with hydraulic oil.

#### 1.4 Training

Only these qualified people, who have been properly trained, can operate the lift. We are quite willing to provide professional training for the users when necessary.

#### Attention: For environment protection, please dispose the disused oil in a proper way.

#### 1.5 Warning signs

All safety warning labels are clearly depicted on the lift to ensure that the operator is aware of and avoids the dangers of using the lift in an incorrect manner. The labels must be kept clean and they have to be replaced if detached or damaged. Please read carefully the meaning of each label and memorize them for future operation





#### **OVERVIEW OF THE LIFT**

#### 2.1 General descriptions

This model is surface mounted and is mainly composed by two lifting platforms, two base plates, four oil cylinders and a set of power unit. The gear pump works when power supply is connected and meanwhile oil in the pump will push upwards the pistons of oil cylinders. Thus, scissor brackets of the lift rise accordingly. In the process of rising, the mechanical lock will automatically engaged so as to avoid sudden drop down caused by failure of hydraulic system.

Besides, designs like, 24V working voltage of control box and limit switch, low-height alarming buzzer, anti-surge valves, etc have fully considered your personal security.

For EE-6604 series, there are type S and type B for different choice.

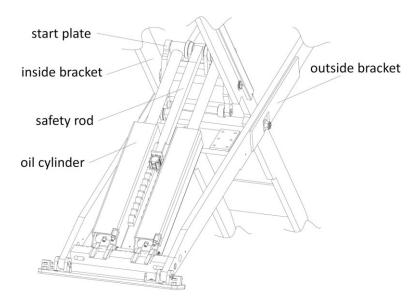


Type B, platform with flexible turntable positions, sideslip and central jack



Type S, smooth platform

#### 2.2 Safety structure

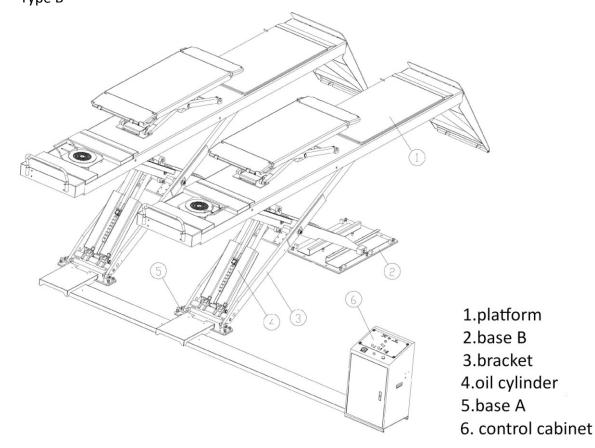


#### 2.3 Technical data

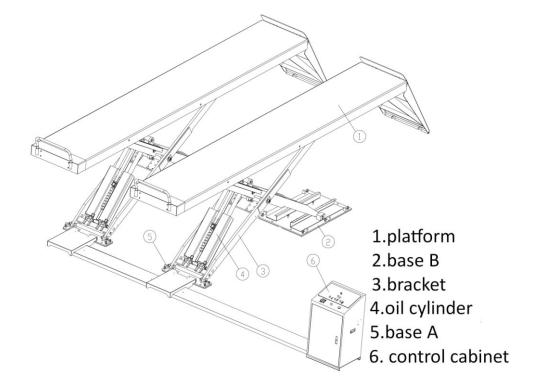
| Model   | Lifting capacity | Lifting time | Min height | Lifting height | Electrical requirement  |
|---------|------------------|--------------|------------|----------------|-------------------------|
| EE-6604 | 4000KG           | 45S          | 180mm      | 1800mm         | 380V/415V, Three Phrase |



### 2.4 Construction of the lift Type B



Type S





#### INSTALLATION INSTRUCTIONS

#### 3.1 Preparations before installation

#### 3.1.1 Tools and equipments needed

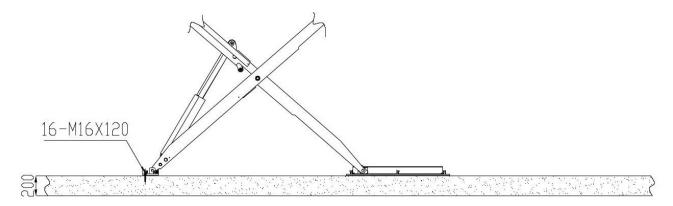
V Electrical drillV Open wrenchesV Screw driversVAdjustable spanner

#### 3.1.2 List for parts checking --- Annex 1 (Packing list)

Unfold the package and check if any parts missed as per Annex 1. Do not hesitate to contact us in case any parts missed, but if you do not contact us and insist installing upon the lack of some parts, we as well as our dealers will not bear any responsibility for this and will charge for any parts subsequently demanded by the buyer.

#### 3.1.3 Ground conditions

The lift should be fixed on a smooth and solid concrete ground with its strength more than 3000psi, tolerance of flatness less than 5mm and minimum thickness of 200mm. In addition, newly built concrete ground must undergo more than 28days' cure and reinforcement.



#### 3.2 Precautions for installation

3.2.1 Joints of oil hose and wiring must be firmly connected in order to avoid leakage of oil hose and looseness of electrical wires.

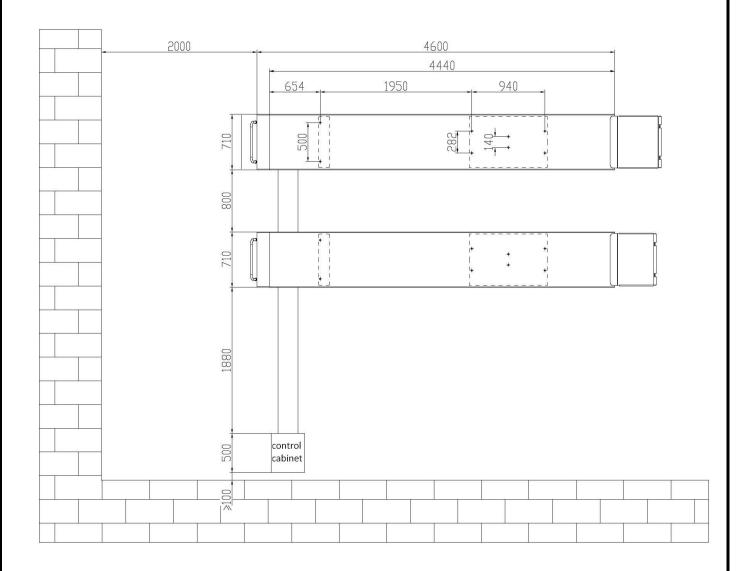
- 3.2.2 All bolts should be firmly screwed up.
- 3.2.3 Do not place any vehicle on the lift in the case of trial running.

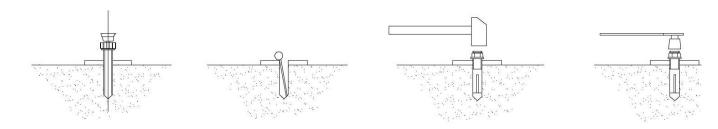


#### 3.3 Installation

#### Step1: Choose installation site.

Use a fork lift to place the machine at installation site as required.



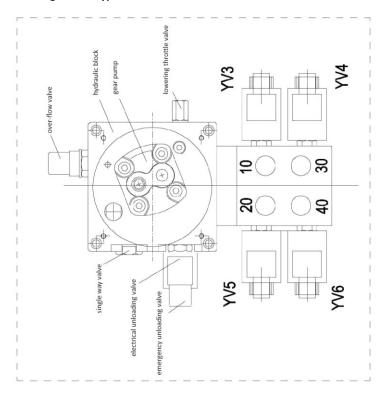


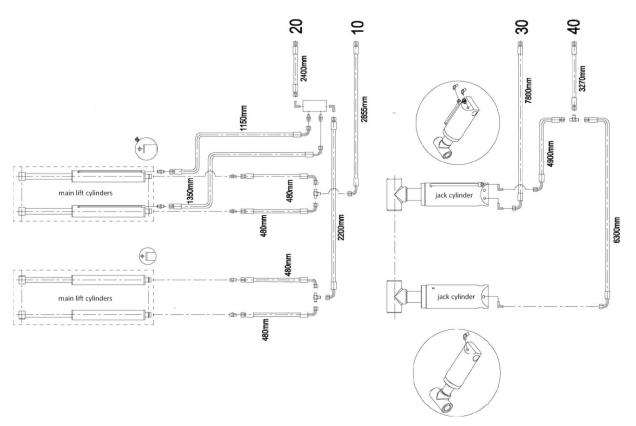


#### Step 2: Connect oil hoses.

Connect the oil hose as per the diagram for oil hose connection. (This step is very important and it is quite necessary to understand the diagram of oil hose connection before operation)

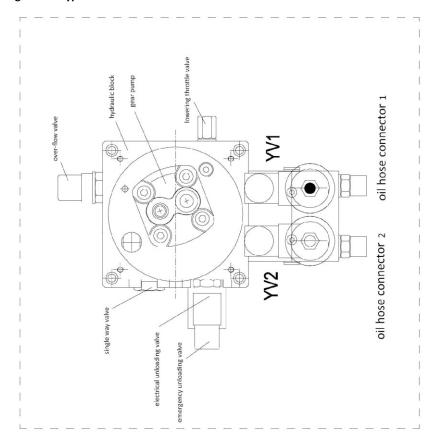
#### Oil hose connection diagram for Type B

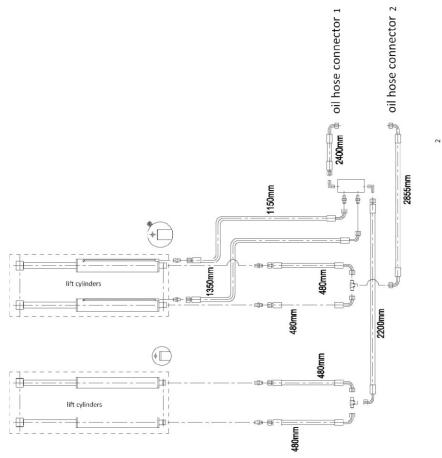






#### Oil hose connection diagram for Type S

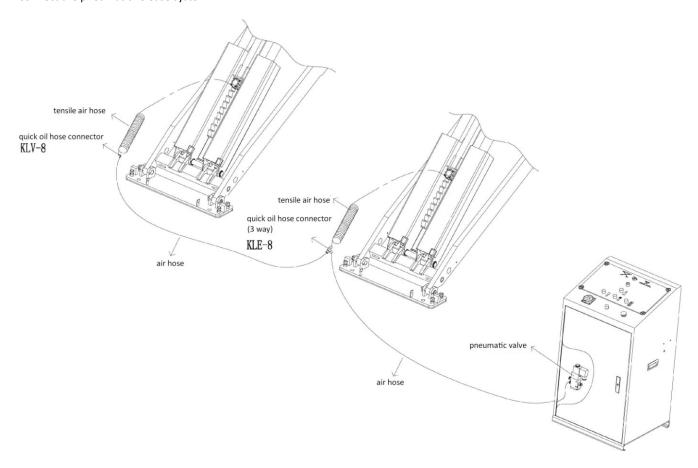






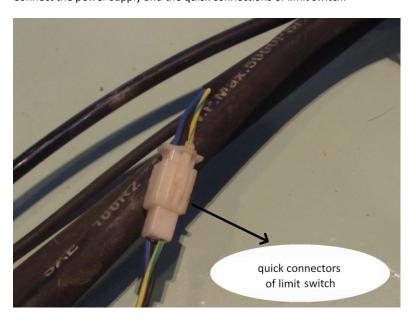
#### Step 3: Connect air hoses.

Connect the pneumatic release system.



#### Step 4: Connect wires.

Connect the power supply and the quick connections of limit switch.





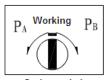
#### Step 5: Fill with hydraulic oil.

Pour 16 liters of anti-abrasion hydraulic oil into the oil tank. The level of oil shall be 10mm to 40mm distance from the top of the tank. (You may measure by the feeler attached on the cap of the tank)

**Note:** As running speed of the lift is mainly decided by the density hydraulic oil, we suggest using NO.46 hydraulic oil when average temperature of the location is above 18 degree Celsius and using NO.32 hydraulic oil when temperature is below 18 degree Celsius.

#### Step 6: Leveling

#### Electrical leveling of platforms of body lift



Option switch

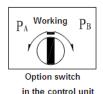
- 1) Connect the power supply and switch on the power button on the control panel until the green indicator light shines.
- 2) Shift the option switch in the control unit to working condition and press the "UP" button for 30 seconds. Normally at least one of the platforms will rise at this movement. (In the case the machine is equipped with three phase power supply and the motor works but the platform does not move upwards after the "UP" button has been pressed for 30 seconds, the operators needs to change the phase order of the motor's wiring)
- 3)Turn the option switch to PA and press "UP" or "DOWN" button to adjust the height of Platform A until it reach the same height as that of Platform B.

Or you can turn the option switch to PB and press "UP" or "DOWN" button to adjust the height of Platform B until it reach the same height as that Platform A.

If synchronization is still not achieved, repeat the above leveling steps until synchronization reached.

#### Electrical leveling of jacking beams





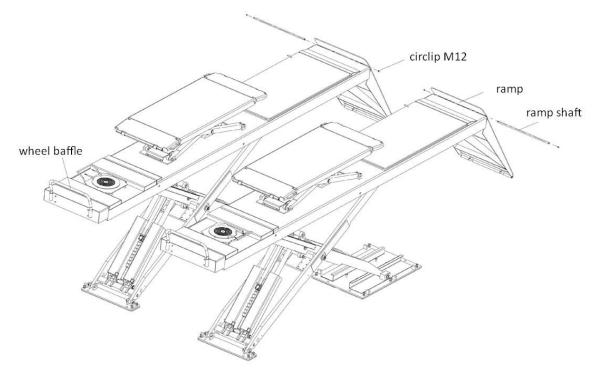
1) Turn the option switch on the control panel to "jack".

2)Turn the option switch in the control unit to leveling condition(PA or PB) and now you can press "UP" or "DOWN I" button to adjust the height of one of the two platform he assistant platform until they reach the same height.

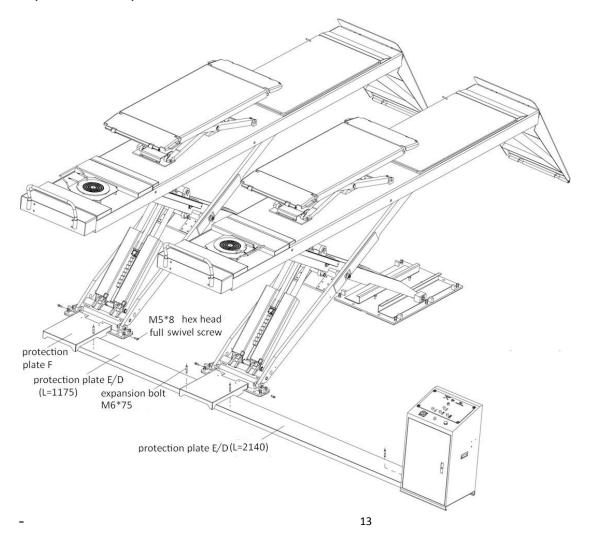
Switch the option switch to working condition and press the "UP" and "DOWN I" button to check the synchronization of the two platforms.



Step 7: Install ramps and wheel baffle



Step 8: Install oil hose protectors





#### 3.4 Items to be checked after installation.

| S/N | Check items                                     | YES | NO |
|-----|---|-----|----|
| 1   | Are two platforms adjusted with the same level? |     |    |
| 2   | Are oil hose tightly connected?                 |     |    |
| 3   | Are all electric connections correct?           |     |    |
| 4   | Are valves of the pump unit oil tight?          |     |    |

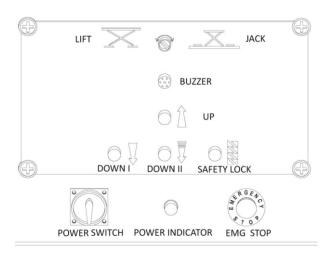
#### **OPERATION INSTRUCTIONS**

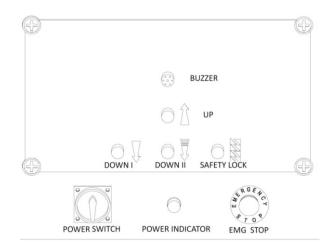
#### 4.1 Precautions

- 4.1.1 Check all the joints of oil hose. Only when there is no leakage, the lift can start work.
- 4.1.2 The lift, if its safety device malfunctions, shall not be used.
- 4.1.3It shall not lift or lower an automobile if its center of gravity is not positioned midway of the runways. Otherwise, we as well as our dealers will not bear any responsibility for any consequence resulted thereby.
- 4.1.4 Operators and other personnel concerned should stand in a safety area during lifting and lowering process.
- 4.1.5 When runways being raised to the desired height, switch off the power at once to prevent any wrong operation done by unconcerned people.
- 4.1.6. Make sure the safety lock of the lift is engaged before start working under the vehicle and no people under the vehicle during lifting and lowering process.

14

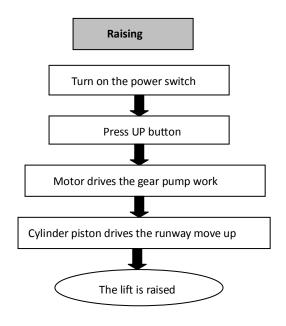
#### 4.2 Descriptions of control panel

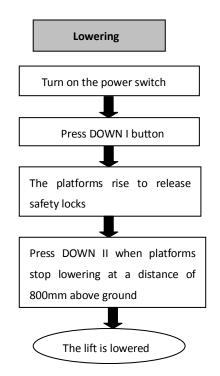






#### 4.3 Flow chart for operation





#### 4.4 Operation instructions

#### Raise the lift

- 1. Make sure that you have read and understood the operation manual before operation.
- 2. Drive and park the vehicle midway between two runways.
- 3. Press the "UP" button to lift the vehicle a bit higher from the ground and check again if the vehicle is in a safe position.
- 4. Having raised the vehicle to the required height, operators must press down the "Safety Lock" button to ensure the mechanical safety lock is engaged. Press the "Emergency Stop" and check again the stability before performing maintenance or repair work.

#### Lower the lift

- 1. Switch on.
- 2. Press the"DOWN I" button to lower the lift. It will stop lowering when clearance between the platforms and the ground reached to 500mm.
- 3. Press "DOWN II" button to continue lowering the platforms. Alarming buzz will be heard unless you stop pressing "DOWN II".
- 4. Drive the vehicle away.



#### **TROUBLE SHOOTING**

ATTENTION: If the trouble could not be fixed by yourself, please do not hesitate to contact us for help. We will offer our service at the earliest time we can. By the way, your troubles will be judged and solved much faster if you could provide us more details or pictures of the trouble.

| TROUBLES                                    | CAUSE   | SOLUTION                                  |  |  |
|---|---|---|--|--|
|   | The wire connection is loose.                             | Check and make a good connection.         |  |  |
| Motor does not run and                      | The motor is burnt  | Replace it.                               |  |  |
| will not raise                              | The limit switch is damaged or the wire                   | Connect it or adjust or replace the limit |  |  |
|   | connection is loose.                                      | switch.                                   |  |  |
|   | The motor run reversely.                                  | Check the wire connection.                |  |  |
|   | Overflow valve is loose or jammed.                        | Clean or adjust it.                       |  |  |
| Motor runs but will not                     | The gear pump is damaged.                                 | Replace it.                               |  |  |
| raise                                       | Oil level is too low.                                     | Add oil.                                  |  |  |
|   | The oil hose became loose or dropped off.                 | Tighten it.                               |  |  |
|   | The cushion valve became loose or jammed.                 | Clean or adjusts it.                      |  |  |
|   | The oil hose leaks.                                       | Check or replace it.                      |  |  |
|   | The oil cylinder is not tightened.                        | Replace the seal.                         |  |  |
| Platforms go down slowly after being raised | The single valve leaks.                                   | Clean or replace it.                      |  |  |
| arter semigraisea                           | The overflow valve leaks.                                 | Clean or replace it.                      |  |  |
|   | Electrical unloading valve leaks.                         | Clean or replace it.                      |  |  |
|   | The oil filter is jammed.                                 | Clean or replace it.                      |  |  |
|   | Oil level is too low.                                     | Add oil.                                  |  |  |
| Raising too slow                            | The overflow valve is not adjusted to the right position. | Adjust it.                                |  |  |
|   | The hydraulic oil is too hot (above 45°).                 | Change the oil.                           |  |  |
|   | The seal of the cylinder is abraded.                      | Replace the seal.                         |  |  |
|   | The throttle valve jammed.                                | Clean or replace.                         |  |  |
| Lauradia atau atau                          | The hydraulic oil is dirty.                               | Change the oil.                           |  |  |
| Lowering too slow                           | The anti-surge valve jammed.                              | Clean it.                                 |  |  |
|   | The oil hose jammed.                                      | Replace it.                               |  |  |

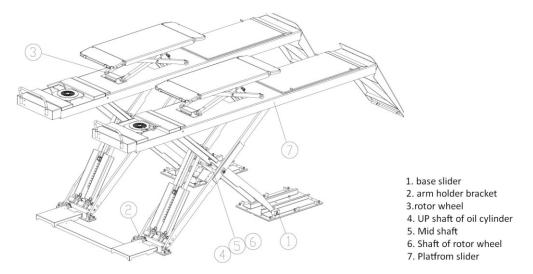


#### **MAINTENANCE**

It is advised to change the hydraulic oil three month after initial use and once per year thereafter for which could prolong the service life of the pump.

Easy and low cost routine maintenance can ensure the lift work normally and safely. Following are requirements for routine maintenance. You may choose the frequency of routine maintenance by consulting your lift's working conditions and time.

#### The following parts need to be lubricated.



#### 6.1 Daily checking items before operation

The user must perform daily check. Daily check of safety system is very important – the discovery of device failure before action could save your time and prevent you from great loss, injury or casualty.

- ·Check whether oil hose well connected. No leakage is allowed.
- ·Check the electric connections . Make sure all connections are in good condition.
- ·Check whether the expansion bolts well anchored.
- ·Check if safety teeth and safety block matched well or not.

#### 6.2 Weekly checking items

- ·Check the flexibility of moving parts.
- ·Check the working conditions of safety parts.
- ·Check the amount of oil left in the oil tank. Oil is enough if the carriage can be raised to highest position. Otherwise, oil is insufficient.
- ·Check whether the expansion bolts well anchored.

#### 6.3 Monthly checking items

- ·Check whether the expansion bolts well anchored.
- ·Check the tightness of the hydraulic system and screw firm the joints if it leaks.
- $\cdot \textbf{Check the lubrication and abrasion circumstance of moving parts.} \\$

#### 6.4 Yearly checking items

- ·Empty the oil tank and check the quality of hydraulic oil.
- ·Wash and clean the oil filter.

If users strictly follow the above maintenance requirements, the lift will keep in a good working condition and meanwhile accidents could be avoided to a large extent.

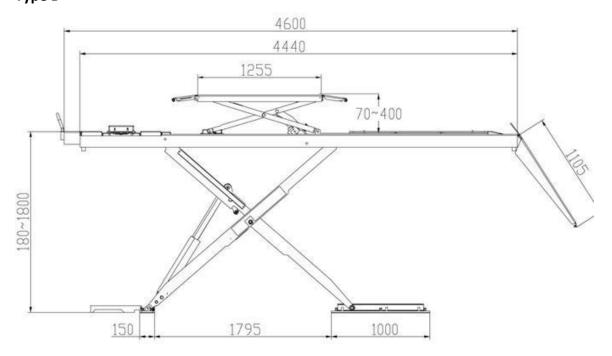


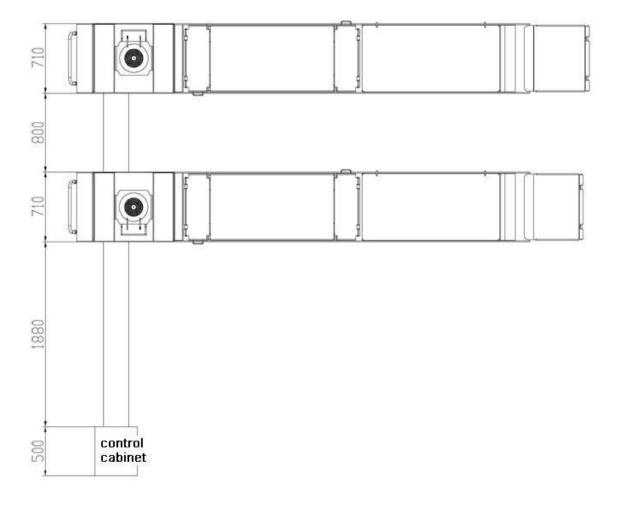
## Annex 1, Packing List of the whole lift

| S/N | Name                         | Spec./DRW#  | Qty | Note            |
|-----|------------------------------|-------------|-----|-----------------|
| 1   | Scissor lift                 | /           | 2   |                 |
| 2   | Expansion bolt               | M16*120     | 16  |                 |
| 3   | Control cabinet              | 1           | 1   |                 |
| 4   | Ramp                         | 6604B-A13   | 2   |                 |
| 5   | Oil hose protector D(L=1175) | 6604B-A18   | 1   |                 |
| 6   | Oil hose protector D(L=2140) | 6604B-A18   | 1   |                 |
| 7   | Oil hose protector E(L=1175) | 6604B-A19   | 1   |                 |
| 8   | Oil hose protector E(L=2140) | 6604B-A19   | 1   |                 |
| 9   | Oil hose protector F         | 6604B-A20   | 2   |                 |
| 10  | Expansion bolt               | M6*75       | 4   |                 |
| 11  | Wheel baffle                 | 6603B-A4-B2 | 2   |                 |
| 12  | Rubber pad                   | 6501-A14    | 4   | Only for type B |



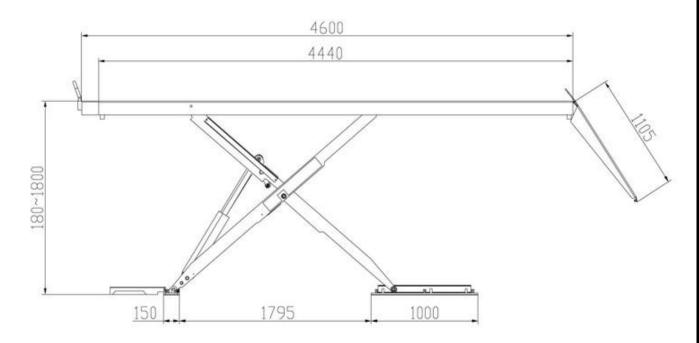
# Annex2, Overall diagram Type B

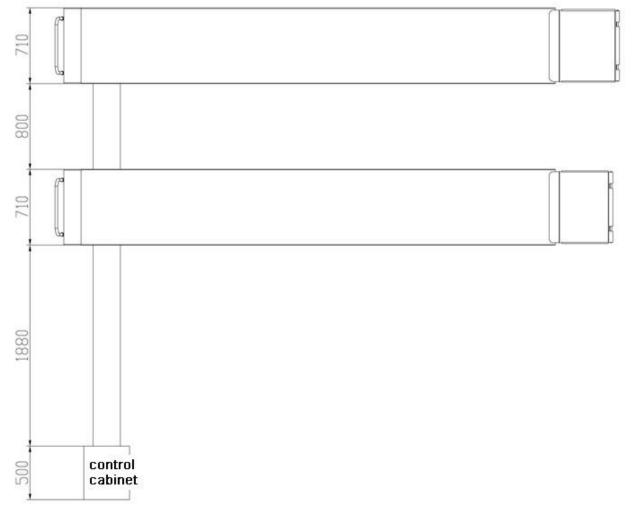






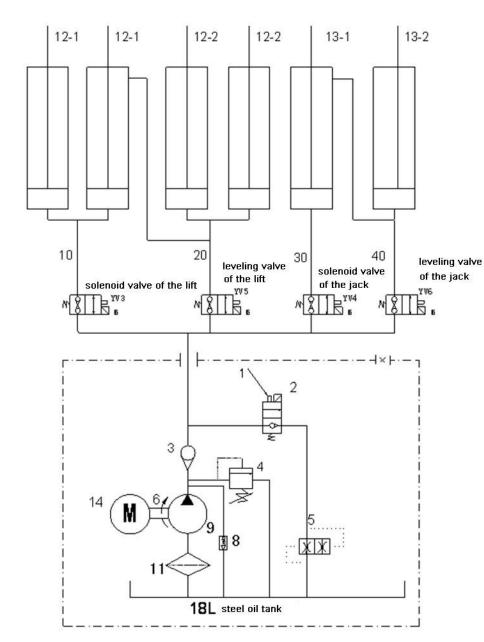
Type S







# Annex 3, Hydraulic working system Type B

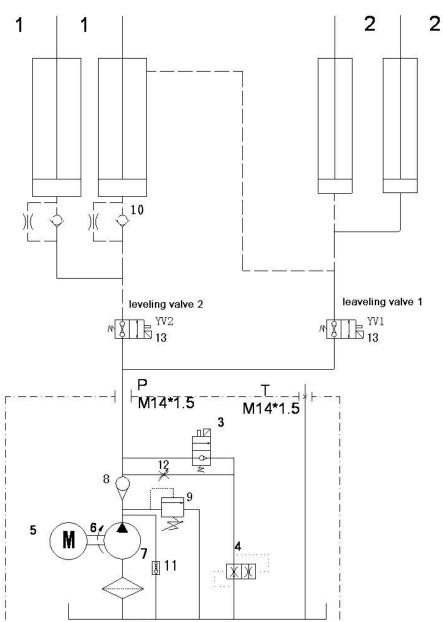


- 1. Emergency unloading valve
- 2. Unloading valve
- 3. Single way valve
- 4. Over-flow valve
- 5. Lowering throttle valve
- 6. Coupling
- 8. Cushion valve
- 9. Gear pump
- 14. Motor
- 11. Oil filter
- 12. Drive oil cylinder (12-1、13-1)
- 13. Assistant oil cylinder (12-2, 13-2)

- 21



#### Type S



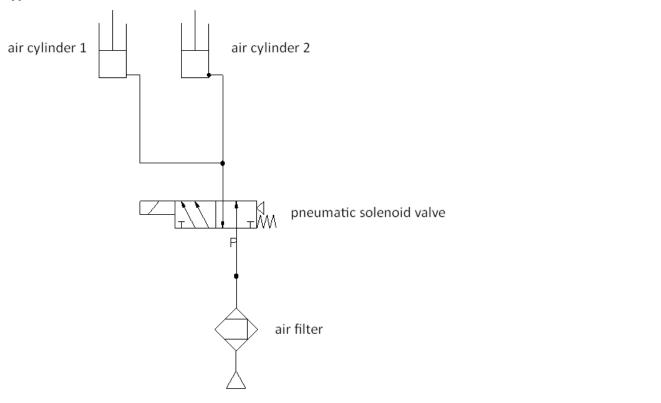
- 1. Drive oil cylinder
- 2. Assistant oil cylinder
- 3. Solenoid unloading valve
- 4. Lowering throttle valve
- 5. Oil pump
- 6. Coupling
- 7. Gear pump
- 8. Single way valve
- 9. Over-flow valve
- 10. Anti-surge valve
- 11. Cushion valve
- 12. Emergency unloading valve
- 13. Leveling valve



### Annex4, Diagram for air supply connection

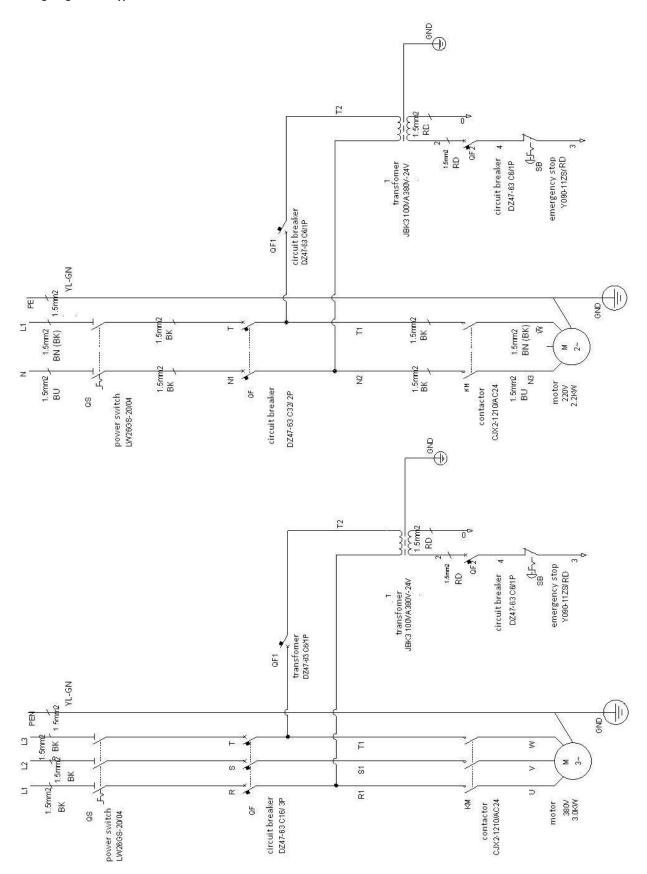
## Type B 5 air cylinder air cylinder CQ2B32\*20 CQ2B32\*20 2 3 pneumatic valve (YA) pneumatic valve (YA1) WI 3V210-08-DC24V 3V210-08-DC24V 1 air filter AFC2000-M

### Type S

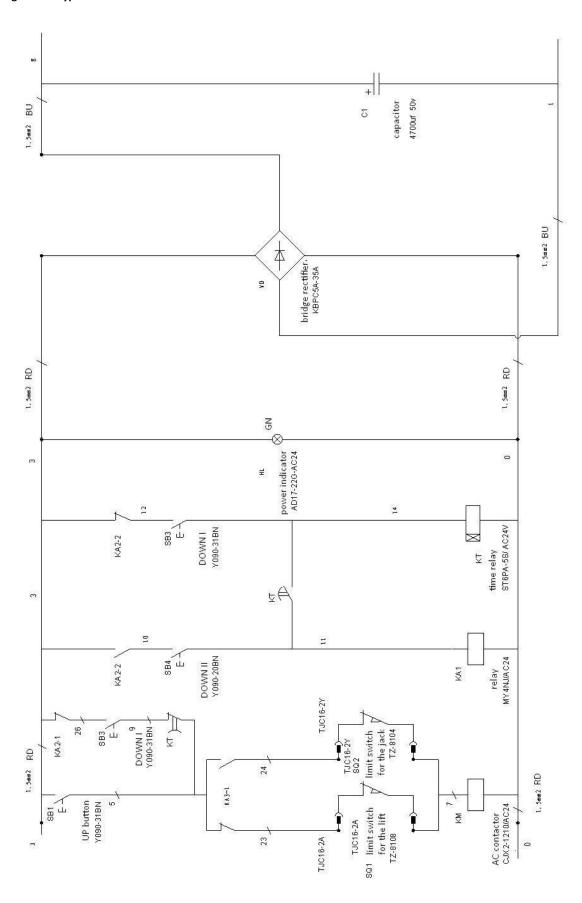




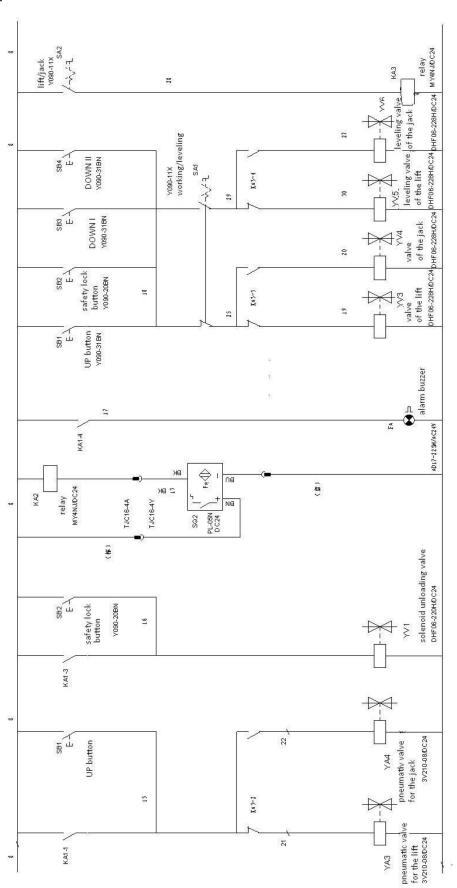
#### Annex5, Wiring diagram



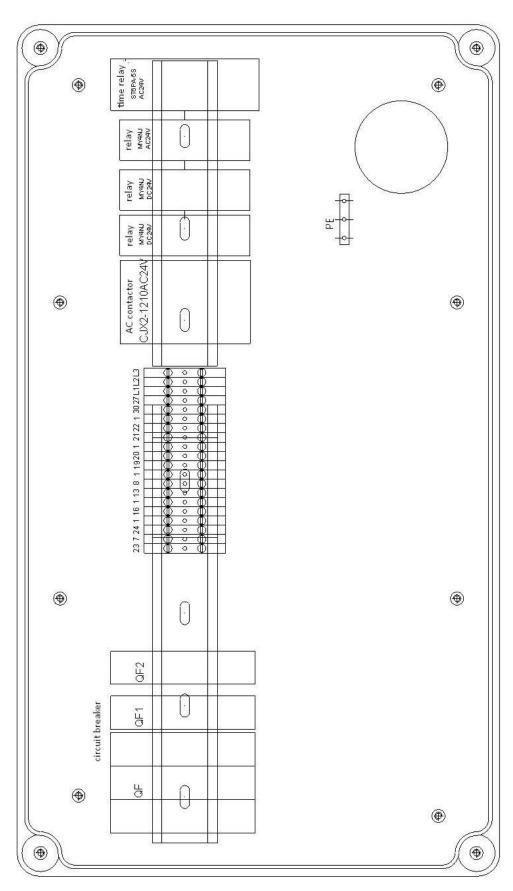




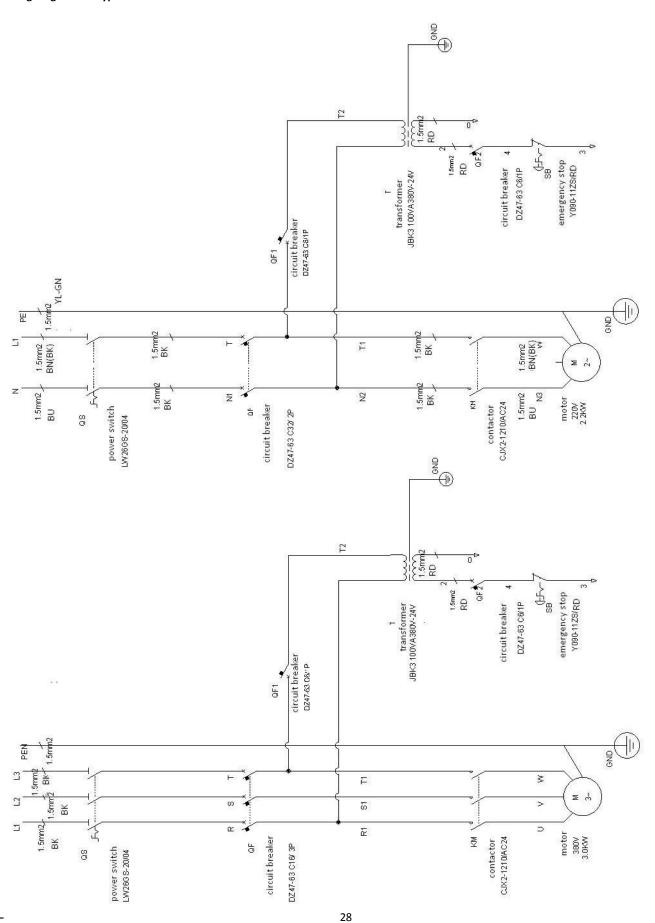




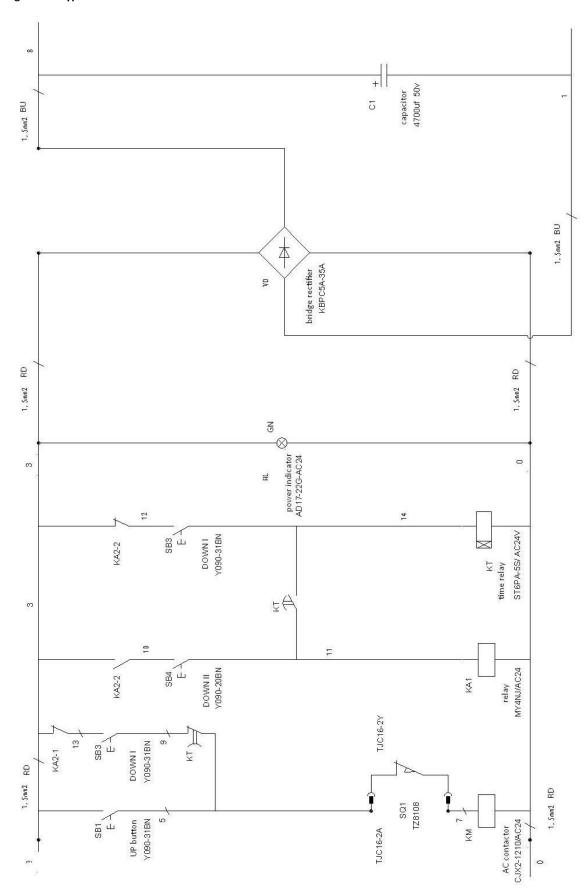




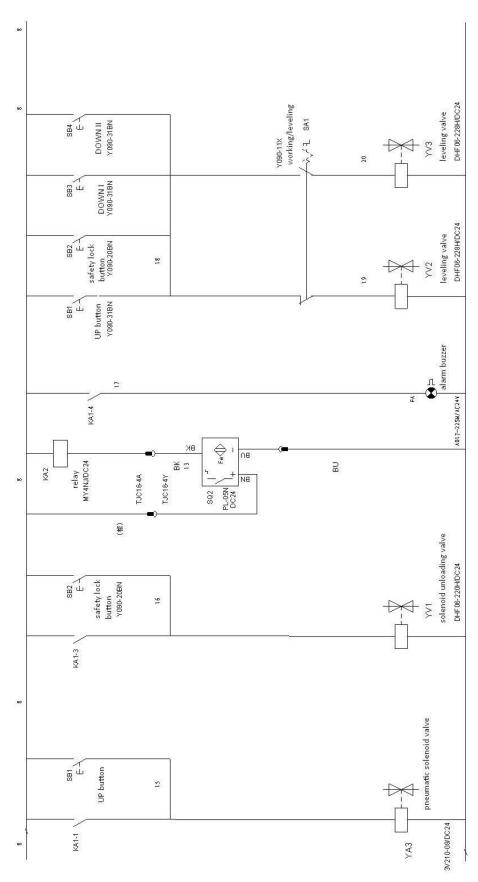




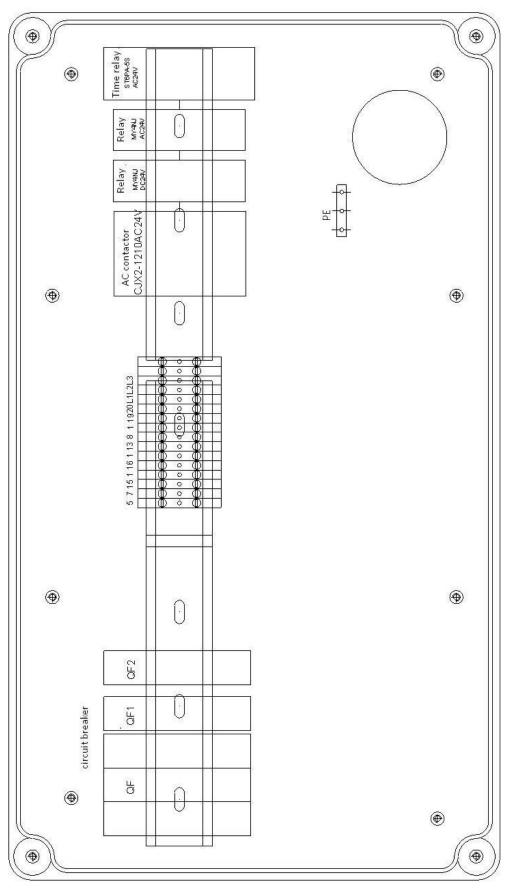






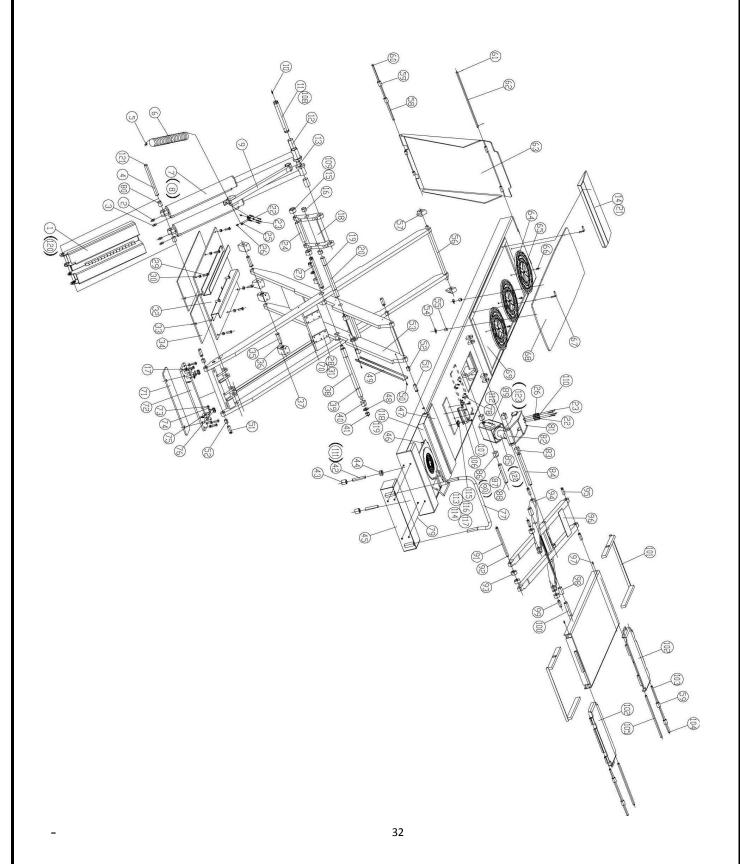






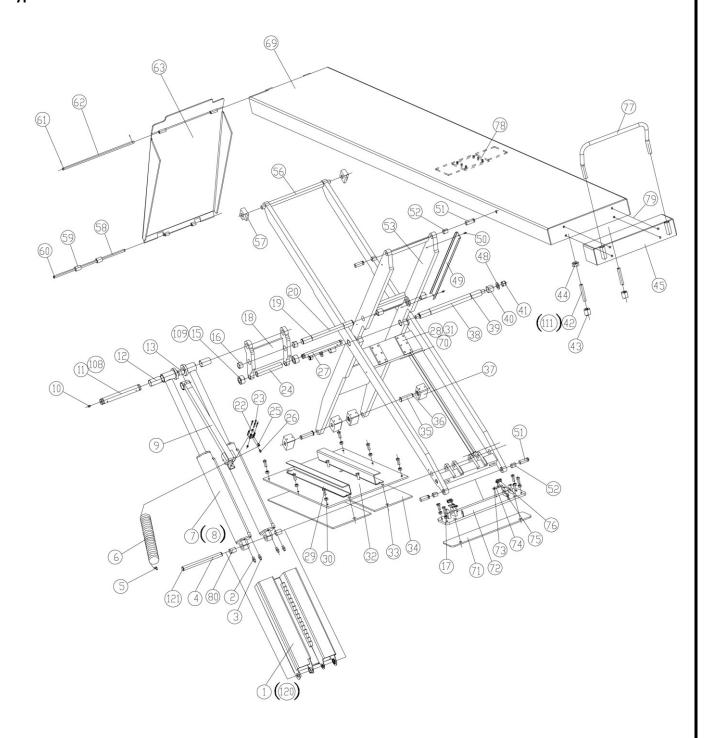


# Annex 6, Separated drawings for the lift Type B





Type S



| S/N | Material# | Name                          | Drawing#/Size | Qty | Property | Note |
|-----|-----------|-------------------------------|---------------|-----|----------|------|
| 1   | 614025008 | Drive oil cylinder sheath     | 6604B-A4-B3   | 1   | welded   |      |
| 2   | 615019006 | Straight throttle valve       | 6501-A4-B15   | 2   | assembly |      |
| 3   | 615019005 | Connector B                   | 6501-A4-B16   | 4   | 45       |      |
| 4   | 410250071 | DOWN shaft of oil cylinder    | 6604B-A4-B5   | 2   | 45       |      |
| 5   | 310102026 | Bend quick air hose connector | KLV-8         | 2   | standard |      |



| S/N | Material#  | Name                                       | Drawing#/Size | Qty | Property | Note             |
|-----|------------|--|---------------|-----|----------|------------------|
| 6   | 310601001  | Tensile tube                               | CL-0850-6     | 1   | standard |                  |
| 7   | 615025004  | Drive oil cylinder of the lift 6604B-A4-B1 |               | 2   | assembly |                  |
| 8   | 615025017  | Assistant oil cylinder of the lift         | 6604B-A24-B2  | 2   | assembly |                  |
| 9   | 614025009C | Safety lock                                | 6604B-A4-B4   | 2   | welded   |                  |
| 10  | 208106001  | Oil cup                                    | M8*1          | 8   | standard | JB/T 7940.1-1995 |
| 11  | 612025001C | UP shaft of oil cylinder                   | 6604B-A7-B2   | 2   | welded   |                  |
| 12  | 205101040  | Bearing                                    | 4070          | 4   | standard | SF-1             |
| 13  | 205101036  | Bearing                                    | 4050          | 2   | standard | SF-1             |
| 14  | 614025004  | Slanting board                             | 6604B-A1-B9   | 2   | welded   |                  |
| 15  | 410250231  | Start rotor wheel                          | 6604B-A7-B6   | 4   | 45       |                  |
| 16  | 205101026  | Bearing                                    | 3525          | 4   | standard | SF-1             |
| 17  | 202103020  | Cross socket flat head screw               | M8*12         | 12  | standard | GB/T819.1-2000   |
| 18  | 614025012B | Start rotor plate                          | 6604B-A7-B1   | 2   | welded   |                  |
| 19  | 204301012  | Circlip                                    | M35           | 4   | standard | GB/T 894.2-1986  |
| 20  | 612025003  | Mid shaft                                  | 6604B-A7-B4   | 2   | welded   |                  |
| 21  | 202109021  | Hex socket cylinder head screw             | M6*20         | 6   | standard | GB/T 70.1-2000   |
| 22  | 310501003  | Air cylinder                               | CQ2B 32*20    | 4   | standard |                  |
| 23  | 202109014  | Hex socket cylinder head screw             | M5*45         | 16  | standard | GB/T 70.1-2000   |
| 24  | 420250030  | Spacer                                     | 6604B-A7-B5   | 2   | Nylon    |                  |
| 25  | 310102024  | Bend quick air hose connector              | KLL8-01       | 2   | standard |                  |
| 26  | 310201003  | Muser                                      | SLM01         | 4   | standard |                  |
| 27  | 612025004  | Rotor shaft                                | 6604B-A7-B3   | 2   | welded   |                  |
| 28  | 206104001  | Inside swivel post pin                     | 10*22         | 12  | standard | GB/T120.2-2000   |
| 29  | 201102035  | Hex head full swivel screw                 | M14*30        | 28  | standard | GB/T 5781-2000   |
| 30  | 203101008  | Hex nut                                    | M14           | 8   | standard | GB/T 6170-2000   |
| 31  | 410250061  | Rotor wheel pad                            | 6604B-A3-B8   | 4   | Q345     |                  |
| 32  | 614025011B | Base B                                     | 6604B-A6-B1   | 2   | welded   |                  |
| 33  | 201201005  | Expansion bolt                             | M16*120       | 16  | standard |                  |
| 34  | 410250103  | Floor padding plate                        | 6604B-A22     | 4   | Q235A    |                  |
| 35  | 410250031  | Down moving shaft                          | 6604B-A3-B5   | 4   | 45       |                  |
| 36  | 204301009  | Circlip                                    | M25           | 4   | standard | GB/T 894.2-1986  |
| 37  | 420250080B | Base slider                                | 6604B-A3-B4   | 8   | POM      |                  |
| 38  | 410250051B | Bracket mid shaft                          | 6604B-A3-B7   | 2   | 45       |                  |
| 39  | 204301014  | Circlip                                    | M40           | 4   | standard | GB/T 894.2-1986  |
| 40  | 205101035  | Bearing                                    | 4040          | 8   | standard | SF-1             |
| 41  | 203103011  | Hex locking nut                            | M24           | 4   | standard |                  |
| 42  | 202205004  | Hex socket flat head tightening nut        | M20*120       | 4   | standard | GB/T 77-2000     |
| 43  | 420260010  | Adjustable nylon slider                    | 6605B-A1-B8   | 8   | Nylon    |                  |
| 44  | 203101012  | Hex nut                                    | M20           | 12  | standard | GB/T 6170-2000   |
| 45  | 614025002  | Вох  | 6604B-A1-B2   | 2   | standard | 6604B.46L        |
| 46  | 615027013  | Turntable                                  | 6435B-A28     | 2   | assembly |                  |
| 47  | 614025023  | Вох  | 6604B-A2      | 2   | welded   |                  |



| S/N | Material#  | Name                                     | Drawing#/Size | Qty | Property | Note            |
|-----|------------|--|---------------|-----|----------|-----------------|
| 48  | 204101014  | Flat washer C                            | M27           | 4   | standard | GB/T 95-1985    |
|     | 410250043B | Oil hose protector (50*10 left)          |               | 2   | Q235A    |                 |
| 49  | 410250123B | Oil hose protector (50*10 right)         | 6604B-A14     | 2   | Q235A    |                 |
|     | 410250133B | Oil hose protector (50*10)               |               | 4   | Q235A    |                 |
| 50  | 202111017  | Hex socket flat head screw               | M6*30         | 16  | standard | GB/T 70.3-2000  |
| 51  | 612025002  | Bracket holder shaft                     | 6604B-A3-B6   | 8   | welded   |                 |
| 52  | 205101012  | Bearing                                  | 2530          | 8   | standard | SF-1            |
| 53  | 614025007B | Bracket B                                | 6604B-A3-B2   | 2   | welded   |                 |
| 54  | 410250011  | Washer                                   | 6604B-A1-B5   | 4   | Q235A    |                 |
| 55  | 420250010  | Nylon sheath                             | 6604B-A1-B3   | 4   | Nylon    |                 |
| 56  | 614025006  | Bracket A (welding)                      | 6604B-A3-B1   | 2   | welded   |                 |
| 57  | 420250070B | Platform slider                          | 6604B-A3-B3   | 4   | POM      |                 |
| 58  | 410250201  | Ramp wheel shaft                         | 6604B-A13-B2  | 2   | 45       |                 |
| 59  | 420180010  | Small wheel                              | MR30-A22-B5   | 4   | Nylon    |                 |
| 60  | 204301004  | Circlip                                  | M15           | 4   | standard | GB/T 894.2-1986 |
| 61  | 204301002  | Circlip                                  | M12           | 4   | standard | GB/T 894.2-1986 |
| 62  | 410250211  | Ramp shaft                               | 6604B-A13-B3  | 2   | 45       |                 |
| 63  | 614025018  | Ramp                                     | 6604B-A13-B1  | 2   | welded   |                 |
| 64  | 420270100  | Ball holder                              | 6435B-A20     | 6   | POM      |                 |
| 65  | 420270110  | Ball                                     | 6435B-A21     | 240 | POM      |                 |
| 66  | 202103024  | Cross socket flat head screw             | M10*25        | 6   | standard | GB/T819.1-2000  |
| 67  | 410250221  | Bolt                                     | 6604B-A16     | 4   | Q235A    |                 |
| 68  | 614025003  | Side slip                                | 6604B-A1-B4   | 2   | welded   |                 |
|     | 614025100  | Platform                                 | 6604B-A1-B1   | 2   | welded   | 6604B.42L       |
| 69  | 614025001B | Platform                                 | 6604B-A1-B1   | 2   | welded   | 6604B.46L       |
| 70  | 202110007  | Hex socket button head screw             | M10*20        | 16  | standard | GB/T 70.2-2000  |
| 71  | 410250093  | Floor padding plate A                    | 6604B-A21     | 2   | Q235A    |                 |
| 72  | 614025010B | Base A                                   | 6604B-A5-B1   | 2   | welded   |                 |
| 73  | 410250013  | Plate for down limit switch              | 6604B-A5-B2   | 1   | Q235A    |                 |
| 74  | 202101029  | Cross socket cap head screw              | M6*12         | 1   | standard | GB/T 818-2000   |
| 75  | 320302002  | Proximity switch                         | PL-05N        | 1   | standard |                 |
| 76  | 202101002  | Cross socket cap head screw              | M3*15         | 2   | standard | GB/T 818-2000   |
| 77  | 410210101  | Wheel baffle                             | 6603B-A4-B2   | 2   | Q235A    |                 |
| 78  | 410250021B | Start rotor plate                        | 6604B-A1-B6   | 2   | Q345     |                 |
| 79  | 202109050  | Hex socket cylinder head screw           | M12*20        | 8   | standard | GB/T 70.1-2000  |
| 80  | 205101015  | Bearing                                  | 2840          | 4   | standard | SF-1            |
| 81  | 614025026  | Safety lock assembly                     | 6604B-A11-B3  | 2   | welded   |                 |
| 82  | 410210430  | Three way oil cylinder connector (small) | 6603B-A3-B8   | 2   | HT200    |                 |
| 83  | 205101025  | Bearing                                  | 3058          | 8   | standard | SF-1            |
| 84  | 410250181  | UP shaft of JACK's oil cylinder          | 6604B-A11-B5  | 2   | 45       |                 |
| 85  | 615025012  | Drive cylinder of the jack               | 6604B-A11-B1  | 1   | assembly |                 |
| 86  | 205101024  | Bearing                                  | 3055          | 2   | standard | SF-1            |



| S/N | Material#  | Name   | Drawing#/Size  | Qty | Property | Note            |
|-----|------------|--|----------------|-----|----------|-----------------|
| 87  | 410210091B | DOWN shaft of JACK's oil cylinder              | 6603B-A3-B7    | 1   | 45       |                 |
| 88  | 204301011  | Circlip  | M30            | 16  | standard | GB/T 894.2-1986 |
| 89  | 614025025  | Cylinder sheath of the JACK's driving cylinder | 6604B-A11-B2   | 1   | welded   |                 |
| 90  | 205101022  | Bearing  | 3045           | 2   | standard | SF-1            |
| 91  | 410250121B | Down wheel shaft of the JACK                   | 6604B-A8-B5    | 2   | 45       |                 |
| 92  | 204301007  | Circlip  | M20            | 16  | standard | GB/T 894.2-1986 |
| 93  | 420250040  | Wheel of the JACK                              | 6604B-A8-B3    | 8   | Nylon    |                 |
| 94  | 614025013  | Bracket A                                      | 6604B-A8-B1    | 2   | welded   |                 |
| 95  | 410250131  | Holder shaft of the JACK                       | 6604B-A8-B6    | 8   | 45       |                 |
| 96  | 614025014  | Arm B  | 6604B-A8-B2    | 2   | welded   |                 |
| 97  | 202110002  | Hex socket button head screw                   | M6*10          | 8   | standard | GB/T 70.2-2000  |
| 98  | 205101023  | Bearing  | 3050           | 4   | standard | SF-1            |
| 99  | 410250141  | UP wheel shaft of the JACK                     | 6604B-A8-B7    | 4   | 45       |                 |
| 100 | 410250111  | Mid shaft of the JACK                          | 6604B-A8-B4    | 2   | 45       |                 |
| 101 | 614025017  | Drawable plate                                 | 6604B-A9-B3    | 4   | welded   |                 |
| 102 | 614025016  | Ramp of the JACK (left)                        | 6604B-A9-B2-C1 | 2   | welded   |                 |
| 102 | 614025022  | Ramp of the JACK (right)                       | 6604B-A9-B2-C1 | 2   | welded   |                 |
| 103 | 410250161  | Ramp wheel shaft of the JACK                   | 6604B-A9-B2-C3 | 4   | 45       |                 |
| 104 | 204301004  | Circlip  | M15            | 16  | standard | GB/T 894.2-1986 |
| 105 | 410250151  | Ramp shaft of the JACK                         | 6604B-A9-B2-C2 | 4   | 45       |                 |
| 106 | 410250033B | DOWN baffle plate of the JACK                  | 6604B-A10      | 2   | Q235A    |                 |
| 107 | 202109027  | Hex socket button head screw                   | M8*12          | 8   | standard | GB/T 70.1-2000  |
| 108 | 202111004  | Hex socket flat head screw                     | M8*12          | 2   | standard | GB/T 70.3-2000  |
| 109 | 205101020  | Bearing  | 3030           | 4   | standard | SF-1            |
| 110 | 310101024  | Straight quick air hose connector              | KLC6-01        | 2   | standard |                 |
| 111 | 202205005  | Hex socket flat head tightening screw          | M20*140        | 4   | standard | GB/T 77-2000    |
| 112 | 201102016  | Hex head full swivel screw                     | M10*15         | 8   | standard | GB/T 5781-2000  |
| 113 | 320301012  | Limit switch                                   | TZ8104         | 1   | standard |                 |
| 114 | 410250241B | Baffle plat for limit switch                   | 6604B-A26      | 1   | Q235A    |                 |
| 115 | 202101027  | Cross socket cap head screw                    | M6*8           | 2   | standard | GB/T 818-2000   |
| 116 | 202101009  | Cross socket cap head screw                    | M4*14          | 2   | standard | GB/T 818-2000   |
| 117 | 202101010  | Cross socket cap head screw                    | M4*25          | 2   | standard | GB/T 818-2000   |
| 118 | 202109030  | Hex socket cylinder head screw                 | M8*25          | 8   | standard | GB/T 70.1-2000  |
| 119 | 614025024  | Вох  | 6604B-A1-B10   | 4   | welded   |                 |
| 120 | 614025019  | Sheath of the oil cylinder                     | 6604B-A24-B1   | 1   | welded   |                 |
| 121 | 204301010  | Circlip  | M28            | 4   | standard | GB/T 894.2-1986 |
| 122 | 615025014  | Cylinder of the JACK                           | 6604B-A12-B1   | 1   | assembly |                 |
| 123 | 614025027  | Sheath of the cylinder                         | 6604B-A12-B2   | 1   | welded   |                 |



### Annex7, Spare parts list

## Spare parts list –electrical parts

| S/N | Material # | Item            | Spec.               | Qty | Unit | Pic.  |
|-----|------------|-----------------|---------------------|-----|------|---|
| 1   | 320304001  | Power switch    | LW26GS-20/04        | pcs | 1    |   |
| 2   | 320401005  | Button          | Y090-31BN           | pcs | 3    |   |
| 3   | 321201001  | Power indicator | AD17-22G-AC24       | pcs | 1    | 1 to Marine   |
| 4   | 320101032  | Transformer     | JBK3-100VA 220V-24V | pcs | 1    | Same as item 7  |
| 5   | 320101033  | Transformer     | JBK3-100VA 230V-24V | pcs | 1    | Same as item 7  |
| 6   | 320101034  | Transformer     | JBK3-100VA 240V-24V | pcs | 1    | Same as item 7  |
| 7   | 320101035  | Transformer     | JBK3-100VA 380V-24V | pcs | 1    |   |
| 8   | 320101036  | Transformer     | JBK3-100VA 400V-24V | pcs | 1    | Same as item 7  |
| 9   | 320101037  | Transformer     | JBK3-100VA 415V-24V | pcs | 1    | Same as item 7  |
| 10  | 320901001  | AC contactor    | CJX2-1210/AC24      | pcs | 1    |   |
| 11  | 320801001  | Circuit breaker | DZ47-63 C16 /3P     | pcs | 1    | <ul><li>→ ○ ○</li></ul>   |
| 12  | 320803003  | Circuit breaker | DZ47-63 C32 /2P     | pcs | 1    | Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandord<br>Tandor |
| 13  | 320803003  | Circuit breaker | DZ47-63 C3 /1P      | pcs | 1    |   |



| S/N | Material # | Item                     | Spec.                | Qty | Unit | Pic.   |
|-----|------------|--------------------------|----------------------|-----|------|--|
| 14  | 310401001  | Pneumatic solenoid valve | 3V210-08/DC24        | pcs | 2    | SMC SMC  |
| 15  | 320301012  | Limit switch             | TZ8104               | pcs | 1    | O LEGICAL DE LA CONTRACTION DE |
| 16  | 320303002  | Option switch            | Y90-11x/21           | pcs | 1    |  |
| 17  | 320303003  | Option switch            | Y90-11x/3            | pcs | 1    |  |
| 18  | 321002001  | Bridge rectifier         | КВРС5А-35А           | pcs | 1    |  |
| 19  | 321001004  | Capacitor                | 4700UF/50V           | pcs | 1    | 00. 50.4700. 50.47   |
| 20  | 321204001  | Control box              | Big                  | pcs | 1    |  |
| 21  | 320602001  | Time relay               | ST6P-2AC24V delay 5S | pcs | 1    | MARIAN STEP  |
| 22  | 320302001  | Proximity<br>switch      | PL-05N               | pcs | 1    |  |



| S/N | Material # | Item                 | Spec.     | Qty | Unit | Pic. |
|-----|------------|----------------------|-----------|-----|------|------|
| 23  | 320401003  | Button               | Y090-20BN | pcs | 1    |      |
| 24  | 320602006  | Time relay<br>holder | PYF-08A-E | pcs | 1    |      |
| 25  | 320301011  | Limit switch         | TZ8108    | pcs | 1    |      |

## Spare parts list -mechanical parts

| S/N | Material # | Item                            | Spec.       | Qty | Note                                 |
|-----|------------|---------------------------------|-------------|-----|--------------------------------------|
| 1   | 420250070B | Platform slider (for the lift ) | 6604B-A3-B3 | 4   |                                      |
| 2   | 420250080B | Base slider (for the lift)      | 6604B-A3-B4 | 8   |                                      |
| 3   | 207103012  | Y shape seal ring               | B7-90*80*7  | 2   | Drive oil cylinder piston (the lift) |
| 4   | 207103022  | Y shape seal ring               | BS50*60*6   | 1   | Drive oil cylinder (the lift)        |
| 5   | 207105007  | Dust proof ring                 | DHS50*58*6  | 1   | Drive cylinder                       |
| 6   | 207103013  | Y shape seal ring               | B7-75*65*7  | 1   | Oil cylinder (the lift)              |
| 7   | 207105008  | Dust proof ring                 | DHS45*53*6  | 1   | Cylinder of the lift                 |
| 8   | 207103014  | Y shape seal ring               | B7-100*90*7 | 2   | Drive cylinder piston of the JACK    |
| 9   | 207103023  | Y shape seal ring               | BS60*70*6   | 1   | Drive cylinder of the JACK           |
| 10  | 207105009  | Dust proof ring                 | DHS60*68*6  | 1   | Drive cylinder of the JACK           |
| 11  | 207103015  | Y shape seal ring               | B7-80*70*7  | 1   | Cylinder piston of the JACK          |
| 12  | 207105008  | Dust proof ring                 | DHS45*53*6  | 1   | Cylinder of the JACK                 |